

sensION™+ PH31

GLP Bench Top pH-meter

Electrochemistry



Complete Simplicity
Hach sensION+, an all-in-one system with guided menu navigation makes general electrochemistry testing fast and simple. Each system is designed to be used in a wide variety of applications and comes complete with everything you need to start testing.

Features and Benefits

- **sensION™+ PH31** is the most complete laboratory pH-meter, with resolution selectable from 0.1, 0.01 to 0.001 pH.
- Includes RS 232 C connectivity for printer or PC. Measuring reports in reduced, standard, or complete (GLP) format.
- Several calibration modes: with automatic recognition of 3 buffer groups, at a determined pH value, etc.
- Automatic buffer recognition: technical DIN 19267, DIN 19266 and up to 3 custom buffers chosen by the user.
- Determination of the electrode's isopotential, important for pH measurements at high temperatures.
- Temperature re-adjustment is possible.
- Limits for maximum and minimum pH value.
- Data Logger for 330 measurements.

Recommended pH Electrodes

Common Characteristics of Electrodes

- High performance electrodes with encapsulated reference element and Ag+ ion barrier (except 5010T)
- Electrodes are combination type and include built in Pt 1000 temperature sensor.

LZW5010T.97.002: 5010T Economical, for general aqueous samples, low maintenance, non-refillable with gel electrolyte, polymer body and a ceramic junction. pH 0 to 12, Temp. 0°C (32°F) to 80°C (176°F)

LZW5011T.97.002: 5011T Dirty samples and food applications, for samples that include high solid content and/or viscous media, etc., low maintenance, non-refillable with polymer electrolyte, thick glass body and an open junction. pH 2 to 14, Temp. 0°C (32°F) to 80°C (176°F)

LZW5014T.97.002: 5014T Universal and high performance, for general aqueous samples, sulfurs, reducing sugars or applications that react with silver ions, refillable, thick glass body and 2 ceramic junctions. pH 0 to 14, Temp. -10°C (14°F) to 100°C (212°F)

LZW5021T.97.002: 5021T For difficult samples, for low ionic strength, colloidal, emulsions and cream samples, refillable, thick glass body and an open junction with a protective "clog-free" sleeve. pH 0 to 14, Temp. 0°C (32°F) to 60°C (140°F)



Be Right™

Specifications

Measured Parameters	pH	mV	Temp.
Range	-2 to 19	± 2000	-20.0 to 150.0°C (-4.0 to 302.0°F)
Resolution	0.1°C (0.1°F)	0.1/1	0.1°C (0.1°F)
Input Accuracy (± 1 digit)	≤ 0.002	≤ 0.2	≤ 0.2°C (0.4°F)
Reproducibility (± 1 digit)	± 0.001	± 0.1	± 0.1°C (0.1°F)

Temperature Compensation

Automatic with Pt 1000, NTC 10KOhm temperature probe (A.T.C.), or manual. Programmable isopotential pH, standard value at pH 7.00.

pH Calibration

Technical buffers DIN 19267: pH 2.00, 4.01, 7.00, 9.21 and 10.01 (values at 25°C)(77°F)

DIN 19266 buffers: 1.679, 4.006, 6.865, 7.000, 9.180 & 12.454 at 25°C (77 °F)

Specific user's buffers.

With 1, 2 or 3 buffers selectable from the range.

Calibration at any pH value (indirect calibration).

Manual introduction of the calibration parameters.

Programmable calibration validity between 0 h and 7 days.

Automatic rejection of electrodes in poor condition.

ORP/Redox Calibration

Automatic recognition of ORP/redox standard 220 mV at 25 °C (77 °F).

Calibration at any mV value.

Temperature Readjustment

Correction of the temp. probe deviation (A.T.C.) at 25 °C (77 °F) and 85°C (185°F).

Data Logger

Storage capacity up to 330 measurements.

Languages

English, German, Spanish, French, Italian and Portuguese.

Display

Graphic, backlit liquid crystal, 128 x 64 dots.

Connectable Sensors

Combined or indicator electrode, BNC connector (Imp. >10¹²Ω).

Reference electrode, banana connector. A.T.C. type Pt 1000 or NTC 10KOhm, banana or telephonic connector.

Connectable Peripherals

Magnetic stirrer. Printer or PC. External PC keyboard or barcode reader.

Directives Low Voltage and EMC

According to 2004/95/EC. According to 2004/108/EC.

Power Supply

External power supply 100 to 240 V, 0.4 A, 47 to 63 Hz, with plug adapters.

Materials

Enclosure, ABS and PC. Keypad, PET with protective treatment.

Physical Parameters

Weight: 1100 g. Size: 350 x 200 x 110 mm.

How To Order

LPV2100.97.0002 pH-meter SensION+ pH31 with accessories

LPV2110T.97.002 Kit: pH-meter SensION+ pH31, accessories and electrode + temp. sensor **5010T**

LPV2111T.97.002 Kit: pH-meter SensION+ pH31, accessories and electrode + temp. sensor **5011T**

LPV2114T.97.002 Kit: pH-meter SensION+ pH31, accessories and electrode + temp. sensor **5014T**

LPV2121T.97.002 Kit: pH-meter SensION+ pH31, accessories and electrode + temp. sensor **5021T**

Included Accessories

- Magnetic stirrer
- Sensor holder
- Solutions: pH 4, pH 7, pH 9 and KCl
- Calibration flasks with magnetic stirring bar
- User manual

Other Accessories:

LZW8201 Thermal printer with 40 columns, interface RS.

LZW8200 Impact printer with 40 columns, interface RS.

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